

# **Australian Bureau of Statistics**

# 6227.0 - Education and Work, Australia, May 2010

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# **Summary**

# **Main Features**

### **NOTES**

### **ABOUT THIS PUBLICATION**

This publication presents information about the educational experience and associated characteristics of persons aged 15 to 64 years and persons aged 65 to 74 years who are in the labour force or marginally attached to the labour force, especially in relation to their labour force status.

Statistics in this publication were collected in May 2010 as a supplement to the Australian Bureau of Statistics' (ABS) monthly Labour Force Survey (LFS).

Information collected in the survey includes: labour force characteristics; participation in education in the year prior to the survey, and in the survey month; type of educational institution; level of education of current and previous study; highest year of school completed; level of highest non-school qualification; level of highest educational attainment; transition from education to work; enrolment experience; selected characteristics of apprentices and trainees; and unmet demand for apprenticeships and traineeships.

Unless otherwise specified, differences between data items highlighted in the Summary of Findings are statistically significant.

This release includes Data Cubes and an expanded range of statistics in spreadsheet format available on the ABS website <a href="https://www.abs.gov.au">https://www.abs.gov.au</a>>.

New Data Cubes for 2010 include persons aged 15-64 years who have completed Year 12 (or equivalent) or attained a formal qualification at Certificate III level or above, and three measures used for COAG National Agreement reporting.

A paper outlining potential gains in accuracy or the measurement of change resulting from pooling SEW data over multiple years will be published in mid 2011.

#### ROUNDING

As estimates have been rounded, discrepancies may occur between sums of the component items and totals.

# **INQUIRIES**

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070.

# **Summary of Findings**

# **SUMMARY OF FINDINGS**

### **PARTICIPATION**

In May 2010, there were 14.5 million people aged 15-64 years (Table 2) and 302,400 people aged 65-74 years in the labour force or marginally attached to the labour force (Table 15) who were in the scope of the survey.

Of those aged 15-64 years, 2.8 million (20%) were enrolled in a course of study. Approximately 1.1 million (39%) of these enrolled people were attending a higher education institution, 755,700 (27%) were at school, 598,500 (21%) were at Technical and Further Education (TAFE) institutions, and 383,800 (14%) were at other educational institutions (Table 1).

In May 2010, 53% of people aged 15-64 years enrolled in a course of study were female, 41% were aged 15-19 years, 64% were studying full-time, and 26% were born overseas (Table 1).

# Study for a qualification

Approximately 96% (2.7 million) of people aged 15-64 years who were enrolled in formal or non-formal learning were enrolled in formal learning (Table 1). The proportion of people aged 15-64 years who were enrolled in formal learning, that is study that is likely to lead to a recognised qualification, increased from 17% in 2001 to 19% in 2010. For females aged 15-64 years, approximately 17% were enrolled in formal learning in 2001, compared to 20% in 2010. Male enrolments in formal learning were 17% in 2001 and 18% in 2010 (Table 2).

Over one-third (38%) of people aged 15-64 years who were enrolled in a non-school qualification were studying for a Bachelor Degree. Almost half of these people (48%) were aged 20-24 years and 26% were aged 15-19 years. Of the 1 million females aged 15-64 years enrolled in a non-school qualification, 55% were completing a Bachelor Degree or higher qualification, compared to 49% of 904,100 males (Table 3).

More females than males were enrolled in most non-school qualifications, however for Certificates III and IV, there were 253,400 males enrolled compared to 195,800 females. Over one-quarter (28%) of males enrolled in a non-school qualification were studying for a Certificate III or IV (Table 3).

As in 2009, the most commonly reported main field of education of current study for people aged 15-64 years enrolled in a non-school qualification in 2010 was Management and commerce (25%), followed by Society and culture (19%). The fields of Health and Education both recorded an increase in the proportion of people enrolled in 2010, 12% and 7%

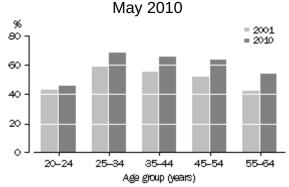
respectively, up from 10% and 6% in 2009. One-fifth (20%) of males aged 15-64 years enrolled in a non-school qualification were studying in the main field of Engineering and related technologies, compared to 1% of females aged 15-64 years. Of the 362,600 people aged 15-64 years enrolled in the field of Society and culture, 69% were female (Table 4). People studying in the main field of Health increased from 9% of persons aged 15-64 years enrolled in a non-school qualification in 2001 to 12% in 2010 (Table 7). Of the 234,400 people aged 15-64 years enrolled in the field of Health, 76% were females and over three-quarters (75%) of people enrolled in Information technology were males (Table 4).

#### **ATTAINMENT**

# Level of highest non-school qualification

The proportion of people aged 15-64 years with a non-school qualification increased from 47% in May 2001 to 56% in May 2010, with the proportion of people with a Bachelor Degree or above increasing from 17% in May 2001 to 23% in May 2010. Over the same period the proportion of people whose highest non-school qualification was an Advanced Diploma or below increased from 29% to 31%. The proportion of people aged 55-64 years with a non-school qualification increased from 42% in May 2001 to 54% in May 2010 (Table 8).

# Proportion of people aged 20-64 years with a non-school qualification, May 2001 to



Among the 8.1 million people aged 15-64 years in May 2010 with a non-school qualification, the most commonly reported main fields of education for the highest non-school qualification were Management and commerce (1.9 million or 24%) and Engineering and related technologies (1.4 million or 17%). In May 2010, more males than females aged 15-64 years had a non-school qualification (4.1 million and 4.0 million respectively) (Table 12)..

# Level of highest educational attainment

Almost one-third (29%) of people aged 15-64 years reported their level of highest educational attainment as Year 11 or below and 21% reported Year 12. Additionally, almost one in four (23%) had a highest level of attainment of Bachelor Degree or above and 17% had a Certificate III or IV. Compared to all Australian states and the Northern Territory, a higher proportion of people in the ACT reported Bachelor Degree and above levels of educational attainment. Almost two-fifths (38%) of people in the ACT had a Bachelor Degree or above as their highest level of educational attainment (Table 14).

In May 2010, of the 1.6 million people aged 65-74 years, 302,400 (19%) were in the labour force or marginally attached to the labour force. Of these, 23% had a Bachelor Degree or above. Over two-fifths (41%) reported their level of highest educational attainment as Year 11 or below (Table 15).

### TRANSITION FROM EDUCATION TO WORK

# Completing a non-school course of study

In May 2010, there were 971,500 people aged 15-64 years who were enrolled in a non-school qualification in 2009 but were not enrolled in May 2010. These people were more likely to be employed full-time in May 2010 than the general population (59% compared with 52%) (Table 10 and Table 16).

#### **School leavers**

In May 2010, there were 351,200 people aged 15-24 years who were enrolled in secondary school in 2009 but were not in May 2010. Of these school leavers, about half (57%) were enrolled at a non-school institution in 2010 and 25% were employed and not studying. In 2010, 10% of school leavers aged 15-24 years were unemployed and not enrolled at a non-school institution with a further 8% not in the labour force and not enrolled at a non-school institution (Table 19).

#### **APPRENTICES**

In May 2010, there were 171,600 people aged 15-64 years who were employed as apprentices and part of the Australian Apprenticeship Scheme. Of these, 66,300 people had commenced their apprenticeship in the last 12 months.

In 2010, the majority of apprentices (88%) were males. The highest number of apprentices, 41,200 were working within the Construction field of trade followed by the Automotive and engineering field of trade with 39,400 persons (Table 21).

There were 20,200 people who gained a place for an apprenticeship/traineeship but were not undertaking it in May 2010, while 40,300 people who applied for an apprenticeship/traineeship in 2010 were unsuccessful in gaining a place (Table 22).

# **About this Release**

Provides selected information on participation in education, highest educational attainment, transition from education to work and current labour force and demographic characteristics for the civilian population aged 15-64 years. Characteristics reported on include: type of educational institution attended or attending; level and main field of education of current study and highest level and main field of educational attainment. Information on unsuccessful enrolment, and deferment of study, is included for persons not studying in the survey year. Data on apprenticeships are also provided. Limited information is also included for persons aged 65-74 years who are in the labour force or marginally attached to it. Some of the statistical tables are presented in time series format.

This product includes Data Cubes and an expanded range of statistics in spreadsheet format available on the ABS website <a href="http://www.abs.gov.au">http://www.abs.gov.au</a>>.

# **History of Changes**

This document was added or updated on 08/12/2010.

#### 31/10/2011

A time series from 2001-2007 has been added to the following three data cubes: Persons aged 15-19 years participating in post-school education or training, persons aged 18-24 years who are fully engaged in employment and/or education or training at Certificate III level or above and persons aged 20-64 years without a formal qualification at Certificate III level or above.

#### 8/12/2010

Selected components associated with this release have been updated to reflect the correction of the proportion of persons aged 15-64 years enrolled in formal learning in 2010, which was published as 18.2% when it should have been 18.8%. This update affects the .pdf, the Education and Work Data Cube and the Summary of Findings. Descriptive content in data cubes for the Persons aged 15-19 years participating in post-school education or training, persons aged 18-24 years who are fully engaged in employment, education or training at Certificate III level or above and persons aged 20-64 years without a formal qualification at Certificate III level or above has also been corrected; this does not impact on the actual figures in the tables.

# **Explanatory Notes**

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### **EXPLANATORY NOTES**

### INTRODUCTION

- 1 The statistics in this publication were compiled from data collected in the Survey of Education and Work (SEW) that was conducted throughout Australia in May 2010 as a supplement to the monthly Labour Force Survey (LFS). Respondents to the LFS who were in scope of the supplementary survey were asked further questions.
- **2** The SEW provides a range of key indicators of educational participation and attainment of persons aged 15-74 years, along with data on people's transition between education and work. The annual time series allows for ongoing monitoring, and provides a link with the more detailed range of educational indicators available from the four-yearly Survey of Education and Training. Specifically, the supplementary survey provides information on: people presently participating in education; level of highest non-school qualification; level of highest educational attainment; characteristics of people's transition between education and work; and data on apprentices.
- **3** The publication <u>Labour Force, Australia (cat. no. 6202.0)</u> contains information about survey design, sample redesign, scope, coverage and population benchmarks relevant to the LFS, which also apply to supplementary surveys. It also contains definitions of

demographic and labour force characteristics, and information about telephone interviewing relevant to both the LFS and supplementary surveys. For more details on recent changes to the LFS, including the reinstatement of the full LFS sample in 2010, see <u>Information Paper:</u> Labour Force Sample Design, Nov 2007 (cat. no. 6269.0).

### **CONCEPTS SOURCES AND METHODS**

4 The conceptual framework used in Australia's LFS aligns closely with the standards and guidelines set out in Resolutions of the International Conference of Labour Statisticians. Descriptions of the underlying concepts and structure of Australia's labour force statistics, and the sources and methods used in compiling these estimates, are presented in <a href="Labour Statistics"><u>Labour Statistics: Concepts, Sources and Methods, April 2007 (cat. no. 6102.0.55.001)</u></a> which is available on the ABS website <a href="https://www.abs.gov.au"><u>https://www.abs.gov.au</u>>.

### **SCOPE**

**5** The scope of the SEW was restricted to persons aged 15-74 years and excluded the following persons:

- members of the permanent defence forces;
- certain diplomatic personnel of overseas governments, customarily excluded from the Census and estimated resident population figures;
- overseas residents in Australia;
- members of non-Australian defence forces (and their dependants) stationed in Australia;
- persons who are permanently unable to work;
- persons aged 65-74 years who are permanently not intending to work, or not in the labour force, or not marginally attached to the labour force;
- special dwelling type institutionalised persons (e.g. patients in hospitals, residents of retirement homes, residents of homes for persons with disabilities, inmates of prisons);
   and
- special dwelling type boarding school pupils.

**6** Boarding school pupils have been excluded from the scope of the SEW since 2005, but were included in earlier collections. The LFS in May 2010 yielded an estimate of 11,500 boarding school pupils aged 15 years and over, who were excluded from the SEW.

**7** In 2009, persons aged 65-74 years who were in the labour force, or were marginally attached to the labour force, were interviewed for the first time for SEW. In May 2010 there were an estimated 302,400 persons aged 65-74 years in the labour force or marginally attached to the labour force, out of a total 1,555,000 persons aged 65-74 years. Persons were determined to be marginally attached to the labour force if they were not in the labour force in the reference week, wanted to work and:

- were actively looking for work but did not meet the availability criteria to be classified as unemployed; or
- were not actively looking for work but were available to start work within four weeks or could start work within four weeks.

**8** This supplementary survey was conducted in both urban and rural areas in all states and territories, but excluded people living in Indigenous communities in very remote parts of

Australia. In 2009, persons who live in very remote areas that are not part of the Indigenous Community Frame (ICF) were interviewed for the first time for SEW. Approximately 0.5% of persons in scope of SEW in 2010 live in very remote areas that are not part of the ICF.

#### **COVERAGE**

**9** The estimates in this publication relate to persons covered by the survey in May 2010. In the LFS, coverage rules are applied which aim to ensure that each person is associated with only one dwelling and hence has only one chance of selection in the survey. See <u>Labour Force, Australia (cat. no. 6202.0)</u> for more details.

### **SAMPLE SIZE**

**10** Approximately 96% of the selected households were fully responding to the SEW, which resulted in around 39,800 completed interviews. In 2010 there was a complete reinstatement of the full LFS sample, following reductions due to budgetary reasons in 2009, this resulted in an approximately 24% larger sample size for SEW compared with 2009. For more information see **Information Paper: Labour Force Sample Design, Nov 2007 <u>(cat. no. 6269.0)</u>.** 

#### **RELIABILITY OF THE ESTIMATES**

**11** Estimates in this publication are subject to sampling and non-sampling errors:

- Sampling error is the difference between the published estimate and the value that would have been produced if all dwellings had been included in the survey. For more details see the Technical Note.
- Non-sampling errors are inaccuracies that occur because of imperfections in reporting by respondents and interviewers, and errors made in coding and processing data. These inaccuracies may occur in any enumeration, whether it be a full count or a sample. Every effort is made to reduce the non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers, and efficient processing procedures.

# **SEASONAL FACTORS**

**12** The estimates are based on information collected in the survey month, and due to seasonal factors they may not be representative of other months of the year.

### **CLASSIFICATIONS**

# **COUNTRY OF BIRTH**

13 Country of birth data are classified according to the Standard Australian Classification of Countries (SACC) 1998 (Revision 2.03) (cat. no. 1269.0). Revision 2.03 amends the Standard Australian Classification of Countries, 1998 (cat. no. 1269.0) according to the creation of the independent republics of Montenegro and Serbia; updates to International Organization for Standardization (ISO) and UN classification codes; and valid output code options for some supplementary codes. These revisions have been effective since January

#### **INDUSTRY**

14 Industry data are classified according to the <u>Australian and New Zealand Standard</u> Industrial Classification (ANZSIC), 2006 (cat. no. 1292.0).

#### **OCCUPATION**

15 Occupation data are classified according to the <u>Australia and New Zealand Standard</u> Classifications of Occupations (ANZSCO), First Edition, 2006 (cat.no. 1220.0).

#### **EDUCATION**

**16** Education data are coded to the <u>Australian Standard Classification of Education</u>, **2001** (cat. no. 1272.0). The ASCED is a national standard classification which can be applied to all sectors of the Australian education system including schools, vocational education and training and higher education. The ASCED comprises two classifications: Level of Education and Field of Education.

17 Level of Education is defined as a function of the quality and quantity of learning involved in an educational activity. There are nine broad levels, 15 narrow levels and 64 detailed levels. For definitions of these levels see the <u>Australian Standard Classification of Education, 2001 (cat. no. 1272.0)</u>.

**18** Field of Education is defined as the subject matter of an educational activity. Fields of education are related to each other through the similarity of subject matter, through the broad purpose for which the education is undertaken, and through the theoretical content which underpins the subject matter. There are 12 broad fields, 71 narrow fields and 356 detailed fields. For definitions of these fields see the Australian Standard Classification of Education, 2001 (cat. no. 1272.0).

### LEVEL OF HIGHEST EDUCATIONAL ATTAINMENT

- **19** Level of highest educational attainment was derived from information on highest year of school completed and level of highest non-school qualification. The derivation process determines which of the 'non-school' or 'school' attainments will be regarded as the highest. Usually the higher ranking attainment is self-evident, but in some cases some secondary education is regarded, for the purposes of obtaining a single measure, as higher than some certificate level attainments.
- **20** The following decision table is used to determine which of the responses to questions on highest year of school completed (coded to ASCED Broad Level 6) and level of highest non-school qualification (coded to ASCED Broad Level 5) is regarded as the highest. It is emphasised that this table was designed for the purpose of obtaining a single value for level of highest educational attainment and is not intended to convey any other ordinality.

Decision	Table: Leve	of Highest B	ducational At	tainment (A	SCED level of	education co	des)		
Highest year	Level of highest non-school qualification								
of school completed	Certificate n.fd. (500)	Certificate III or Nin.f.d. (510)	Certificate IV (51.1)	CerticateIII (514)	Certificate For IIn.fd. (520)	Certicatell (521)	Certificate I (524)		
Secondary Education n.f.d. (600)	Secondary Education ruf.d.	Certificate III or IV n.fd.	Certicate IV	CerticateIII	Certificate For I rufed.	Caticatell	Certicatel		
Senior Secondary Education rufd. (610)	Serior Secondary n.fd.	Certificate III or IV rufd.	CerticatolV	CerticateIII	Senior Secondary n.fd.	Senior Secondary n.fd.	Senior Secondary nf.d.		
Year 12 (511)	Year 12	Certificate III or IV n.fd.	Certificate IV	Certificate III Year 12		Yéar 12	Year12		
Yeer 11 (513)	Year 11	Certificate III or IVn.f.d.	Certificate IV	Certifaste III	Year 11	Year11	Yeer 11		
Junior Secondary Education n.f.d. (620)	Junior Secondary Education n.fd.	Certificate III or IV n.f.d.	CerticateN	CerticaleIII	Certificate or II	Certificate II	Certicate		
Year 10 (521)	Year 10	Certificate III or IVn.fd.	CerticateN	CerticaleIII	cate III Year 10 Year 10		Year 10		
Year 9 (522)	Year9	Certificate III or IVn.f.d.	CerticateN	CerticateIII	Certicate or II n.f.d.	Certificate II	Certicate		
Year 8 (523)	Year 8	Certificate III or N n.f.d.	Certicale N	Certificate III	Certificate or II	Certificate II	Certicate		
Year7 (624)	Year 7	Certificate III or IV rufd.	Certificate IV	Cefficalell	Certificate For II	Certicatell	Certicate		

21 The decision table is also used to rank the information provided in a survey about the qualifications and attainments of a single individual. It does not represent any basis for comparison between differing qualifications. For example, a person whose highest year of school completed was Year 12, and whose level of highest non-school qualification was a Certificate III, would have those responses crosschecked on the decision table and would as a result have their level of highest educational attainment output as Certificate III. However, if the same person answered 'certificate' to the highest non-school qualification question, without any further detail, it would be crosschecked against Year 12 on the decision table as Certificate not further defined. The output would then be Year 12. The decision table, therefore, does not necessarily imply that one qualification is 'higher' than the other. For more details, see Education Variables, 2002 (cat. no. 1246.0).

#### LEVEL OF EDUCATION OF CURRENT STUDY

**22** Level of education of current study is derived using the decision table displayed above, taking into account Level of education of school study in current year and Level of education of non-school study in current year for persons who are undertaking concurrent qualifications.

### **COMPARABILITY OF TIME SERIES**

**23** Supplementary surveys are not always conducted on the full LFS sample. Since August 1994 the sample for supplementary surveys has been restricted to no more than seveneighths of the LFS sample. Since it was introduced, this survey has been conducted on various proportional samples and therefore sampling errors associated with previous

supplementary surveys may vary from the sampling error for this survey.

- **24** Since 2005, boarding school pupils have been excluded from the scope of the SEW, but were included in earlier collections. For more details, see paragraph 6 of the Explanatory Notes.
- 25 Since 2007, industry data in the SEW are classified according to the <u>Australian and New Zealand Standard Industrial Classification</u>, 2006 (cat. no. 1292.0). Industry data prior to this were classified according to the <u>Australian and New Zealand Standard Industrial Classification</u>, 1993 (cat. no. 1292.0). Therefore, industry data from SEW prior to 2007 are not directly comparable to 2009 industry data.
- 26 Since 2007, occupation data in the SEW are classified according to the <u>Australia and New Zealand Standard Classifications of Occupations</u>, First Edition, 2006 (cat.no. 1220.0). Occupation data prior to this were classified according to the <u>Australia Standard Classifications of Occupations</u>, Second Edition, 1997 (cat.no. 1220.0). Therefore, occupation data from SEW prior to 2007 are not directly comparable to 2009 occupation data.
- 27 In previous years, only persons aged 15-54 years were included in the apprenticeship/traineeship survey questions. In 2008, the age scope was extended to include persons aged 55-64 years for these questions. In 2009, the age scope was further extended to include persons aged 65-74 years for these questions. In 2008, the definition for apprentices and trainees changed from those employed as apprentices/trainees to include only those with a formal contract under the **Australian Apprenticeship Scheme**. Therefore data on apprentices from previous years are not directly comparable to 2008 and subsequent data. Note that **Australian School-based Apprenticeships** are excluded.
- **28** Revisions are made to population benchmarks for the LFS after each five-yearly Census of Population and Housing. The last such revision was made in February 2009 to take account of the results of the **2006 Census of Population and Housing.** Estimates from supplementary surveys conducted from and including 2009 are therefore based on these 2006 population benchmarks.

### **COMPARISON WITH OTHER ABS SOURCES**

- 29 Since the SEW is conducted as a supplement to the LFS, data items collected in the LFS are also available. However, there are some important differences between the two surveys. The SEW sample is a subset of the LFS sample (see Paragraph 1 of these Explanatory Notes) and the SEW had a response rate of 96% which is lower than the LFS response rate for the same period of 97%. Due to these differences between the samples, the SEW data are weighted as a separate process to the weighting of LFS data. Differences may therefore be found in the estimates collected in the LFS and published as part of the SEW, when compared with estimates published in the May 2010 issue of Labour Force, Australia (cat. no. 6202.0).
- **30** Additionally, estimates from the SEW may differ from the estimates produced from other ABS collections, for several reasons. The SEW is a sample survey and its results are subject to sampling error. Results may differ from other sample surveys, which are also subject to sampling error. Users should take account of the RSEs on estimates and those of other survey estimates where comparisons are made.
- **31** Differences may also exist in the scope and/or coverage of the SEW compared to other surveys. Differences in estimates, when compared to the estimates of other surveys, may

result from different reference periods reflecting seasonal variations, non-seasonal events that may have impacted on one period but not another, or because of underlying trends in the phenomena being measured.

- **32** Finally, differences can occur as a result of using different collection methodologies. This is often evident in comparisons of similar data items reported from different ABS collections where, after taking account of definition and scope differences and sampling error, residual differences remain. These differences are often the result of the mode of the collections, such as whether data are collected by an interviewer or self-enumerated by the respondent, whether the data are collected from the person themselves or from a proxy respondent, and the level of experience of the interviewers. Differences may also result from the context in which questions are asked, i.e. where in the interview the questions are asked and the nature of preceding questions. The impacts on data of different collection methodologies are difficult to quantify. As a result, every effort is made to minimise such differences.
- 33 The following table, Comparison of Data from SEW to Other ABS Sources, presents comparisons between a number of key SEW data items and similar data items from other ABS sources. These sources include data collected in the LFS, which were reported in the May 2009 issue of <a href="Labour Force">Labour Force</a>, <a href="Australia">Australia</a> (cat. no. 6202.0) and data collected from the Survey of Education and Training (SET), which were reported in the <a href="Education and Training Experience">Education and Training Experience</a>, <a href="2009">2009</a> (cat. no. 6278.0). The comparison shows SEW data are broadly consistent with these ABS sources.

#### COMPARISON OF DATA FROM SEW TO OTHER ABS SOURCES

	Other ABS sources	SEW - May 2010 %
LFS-May 2010		
Labour force status		
Employed	72.1	74.0
Employed full time	51.0	52.3
Employed part time	21.0	21.7
Unemployed	4.1	4.2
Not in the labour force	23.9	21.8
SET-2009(a)		
Highest year of school completed		
Year 12	51.3	56.5
Year 11	12.4	10.9
Year 10 or below	36.3	32.5
Level of highest non-school qualification		
Graduate Diploma/Graduate Certificate or above	7.7	6.5
Bachelor Degree	13.9	16.5
Advanced Diploma/Diploma	10.2	9.3
Certificate III/IV	17.4	17.2
Certificate I/II	1.2	4.0

<sup>(</sup>a) Data restricted to persons aged 15-64 years to align with SEW.

### **CONFIDENTIALISED UNIT RECORD FILE**

**34** Confidentialised unit record files (CURF) release confidentialised microdata from surveys, thereby facilitating interrogation and analysis of data. For the Education and Work survey, a basic CURF is released every two years. A CURF will not be released for the 2010 survey. The Education and Work CURF was last released in 2009. For more details, refer to the 2009 SEW CURF, **Technical Manual: Survey of Education and Work, Australia -**

# Confidentialised Unit Record File, May 2009 (cat. no. 6227.0.30.002).

#### **PREVIOUS SURVEYS**

**35** Results of similar surveys have been published in previous issues. These surveys were conducted annually from February 1964 to February 1974, in May 1975 and 1976, in August 1977 and 1978, and annually in May since 1979. Results of previous surveys were published in <u>Transition from Education to Work, Australia (cat. no. 6227.0)</u> from 1964 to 2001. Since May 2002, the results of the survey have been published in <u>Education and Work, Australia (cat. no. 6227.0)</u>.

#### **NEXT SURVEY**

**36** The ABS intends to conduct this survey again in May 2011.

#### **ACKNOWLEDGMENT**

**37** ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated; without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the **Census and Statistics Act 1905**.

#### **RELATED PUBLICATIONS**

**38** Other publications which may be of interest include:

- <u>A Directory of Education and Training Statistics (cat. no. 1136.0) issued irregularly, last issued in March 2009</u>
- Adult Learning (cat. no. 4229.0) issued irregularly, first issue 2006-2007, released in December 2007
- Adult Literacy and Life Skills Survey, Summary Results, Australia (cat. no. 4228.0) - issued irregularly, last issue 2006 released in 2008
- Education and Training Experience, Australia (cat. no. 6278.0) issued four-yearly, last issue 2009 released in March 2010
- Education and Training Indicators, Australia (cat. no. 4230.0) issued irregularly, first issue released in December 2002
- Information Paper: Measuring Learning in Australia, Dictionary of Standards for Education and Training Statistics (cat. no. 4232.0.55.001) - issued irregularly, last issue released in October 2004
- Information Paper: Measuring Learning in Australia, Framework for Education and Training Statistics (cat. no. 4213.0) - released on a single issue basis in January 2003
- Information Paper: Measuring Learning in Australia, Plan to Improve the Quality,
   Coverage and Use of Education and Training Statistics (cat. no. 4231.0) issued irregularly, first issue released in September 2004
- Labour Force, Australia (cat. no. 6202.0) issued monthly
- Schools, Australia (cat. no. 4221.0) issued annually, last issued in March 2009

website <a href="https://www.abs.gov.au">https://www.abs.gov.au</a>. The ABS also issues a daily upcoming release advice on the website that details products to be released in the week ahead. The National Centre for Education and Training Topics @ a Glance page also contains a wealth of information and useful references. This site can also be accessed through the ABS website.

# **Bibliography**

### **BIBLIOGRAPHY**

Australian Bureau of Statistics (ABS) 2008, **Education and Work, 2008**, cat. no. 6227.0, Canberra.

# **Glossary**

# **GLOSSARY**

# **Apprentice**

An apprentice is a person aged 15-64 years who has entered into a legal contract (called a training agreement or contract of training) with an employer, to serve a period of training for the purpose of attaining tradesperson status in a recognised trade. In this survey, apprentices are identified by their answer to a question specifically pertaining to the **Australian Apprenticeship Scheme**. Note that **Australian School-based Apprenticeships** are excluded.

# **Australian Standard Classification of Education (ASCED)**

The ASCED is a national standard classification which includes all sectors of the Australian education system: that is, schools, vocational education and training, and higher education. From 2001, ASCED replaced a number of classifications used in administrative and statistical systems, including the ABSCQ. The ASCED comprises two classifications: Level of education and Field of education. See <u>Australian Standard Classification of Education, 2001 (cat. no. 1272.0).</u>

### Certificate not further defined

Survey responses are coded to Certificate not further defined (n.f.d.) when there is not enough information to code them to Certificate I, II, III or IV in the <u>Australian Standard</u> Classification of Education, 2001 (cat. no. 1272.0), Level of education classification.

# Completed

The completion of all academic requirements for the conferring of an award from an institution.

### **Completers**

Persons aged 15-64 years who by May had completed the non-school qualification in which they were enrolled in the previous year.

# **Country of birth**

Country of birth has been classified according to the <u>Standard Australian Classification of Countries (SACC), 1998 (Revision 2.03) (cat. no. 1269.0).</u>

### **Educational institution**

Any institution whose primary role is education. Included are schools, higher education establishments, colleges of technical and further education, public and private colleges, etc. Excluded are institutions whose primary role is not education.

# **Employed**

Persons who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (comprising employees, employers and own account workers); or
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work and were:
  - away from work for less than four weeks up to the end of the reference week: or
  - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week; or
  - away from work as a standard work or shift arrangement; or
  - on strike or locked out; or
  - on workers' compensation and expected to return to their job; or
- were employers or own account workers who had a job, business or farm, but were not at work.

# **Employed full-time**

Employed persons who usually worked 35 hours or more a week (in all jobs) and those who, although usually working less than 35 hours a week, worked 35 hours or more during the reference week.

# **Employed part-time**

Employed persons who usually worked less than 35 hours a week (in all jobs) and either did so during the reference week, or were not at work in the reference week.

# **Enrolled**

Refers to persons registered for a course of study in the particular reference period (e.g. survey month, or previous calendar year) at an educational institution (as defined).

#### Field not determined

Field not determined includes inadequately described responses or where no responses

were given.

#### Field of education

Field of education is defined as the subject matter of an educational activity. It is categorised according to the <u>Australian Standard Classification of Education</u>, <u>2001 (cat. no. 1272.0)</u> Field of education classification. This publication presents the main field of education studied.

#### Field of trade

Refers to the occupation of an apprentice and is classified according to the <u>Australian and New Zealand Standard Classification of Occupations (ANZSCO), First Edition, 2006 (cat. no. 1220.0)</u> Unit Group.

# **Formal Learning**

Refers to learning which is structured, taught in institutions and organisations and leads to a recognised qualification issued by a relevant body, in recognition that a person has achieved learning outcomes or competencies relevant to identified individual, professional, industry or community needs. A learning activity is formal if it leads to a learning achievement that is possible to position within the Australian Qualification Framework (AQF) and includes workplace training if such training results in a qualification.

# **Higher education institution**

An Australian institution providing higher education courses, e.g. universities; colleges of advanced education; institutes of advanced education; institutes of higher education; institutes of tertiary education; agricultural colleges and some institutes of technology.

# **Industry**

Industry data is classified according to the <u>Australian and New Zealand Standard</u> Industrial Classification (ANZSIC), 2006 (cat. no. 1292.0).

#### Leavers

Persons who were enrolled in a course of study for a qualification in the previous year, but were not enrolled in any course of study for a qualification at the time of the survey.

#### Level of education

Level of education is a function of the quality and quantity of learning involved in an educational activity. It is categorised according to the <u>Australian Standard Classification</u> <u>of Education</u>, <u>2001 (cat. no. 1272.0)</u> Level of education classification.

# Level of highest educational attainment

Level of highest educational attainment identifies the highest achievement a person has attained in any area of study. It is not a measurement of the relative importance of different fields of study but a ranking of qualifications and other educational attainments regardless of the particular area of study or the type of institution in which the study was undertaken. See paragraphs 20-22 of the Explanatory Notes for how highest level is derived.

# Level not determined

Level not determined includes inadequately described responses or where no responses were given.

# Marginal attachment to the labour force

People who were not in the labour force in the reference week, wanted to work and:

- were actively looking for work but did not meet the availability criteria to be classified as unemployed; or
- were not actively looking for work but were available to start work within four weeks.

The criteria for determining those in the labour force are based on activity (i.e. working or looking for work) and availability to start work during the reference week. The criteria associated with marginal attachment to the labour force, in particular the concepts of wanting to work and reasons for not actively looking for work, are more subjective. Hence, the measurement against these criteria is affected by the respondent's own interpretation of the concepts used. An individual respondent's interpretation may be affected by their work aspirations, as well as family, economic and other commitments.

# **Non-formal learning**

Non-formal learning refers to structured taught learning, but differs from formal learning in that it does not lead to a qualification within the AQF. It includes non-accredited workplace training, that is, training that does not lead to a recognised qualification.

Some examples of types of non-formal courses include:

- Adult education courses (eg. introduction to computing)
- Hobby and recreation courses (eg. ceramics, jewellery making, dancing)
- Personal enrichment courses (eg. personal fiance, sport instruction, public speaking)
- Work-related courses (eg. manager development, job search training, induction courses)
- First aid courses
- Bridging courses
- Statement of attainment

### Non-school educational institution

An educational institution, other than a secondary school. This includes higher education establishments, colleges of technical and further education, public and private colleges, etc. Institutions excluded are those whose primary role is not education.

# **Non-school qualification**

Non-school qualifications are awarded for educational attainments other than those of preprimary, primary or secondary education. They include qualifications at the Postgraduate Degree level, Master Degree level, Graduate Diploma and Graduate Certificate level, Bachelor Degree level, Advanced Diploma and Diploma level, and Certificates I, II, III and IV levels. Non-school qualifications may be attained concurrently with school qualifications.

#### Not in labour force

Persons who were not in the categories 'employed' or 'unemployed' (as defined).

# Occupation

Occupation data is classified according to the <u>Australian Standard Classification of Occupations</u>, <u>First Edition</u>, <u>2006 (cat. no. 1220.0)</u>.

### Other educational institution

Includes institutions or establishments that offer educational courses such as industry skills centres, professional or industry associations, equipment/product manufacturers or suppliers, and instances where insufficient information was available to determine the type of educational institution.

# Qualification

Formal certification, issued by a relevant approved body, in recognition that a person has achieved an appropriate level of learning outcomes or competencies relevant to identified individual, professional, industry or community needs. Statements of attainment awarded for partial completion of a course of study at a particular level are excluded.

#### Reference week

The week preceding the week in which the interview was conducted.

### **School**

An educational institution whose major activity is the provision of formal classes of primary or secondary education, or the provision of primary or secondary distance education.

# **School leavers**

Persons aged 15-24 years who attended school in 2009 but were not attending school prior to the survey date in May 2010.

# Study for a qualification

The reported level of education of any study being undertaken that will lead to formal certification, issued by a relevant approved body, in recognition that a person has achieved learning outcomes or competencies relevant to identified individual, professional, industry or community needs. In this survey, if the respondent was still attending school their level of study was recorded as their current year of schooling. If the respondent had left school and was enrolled in study for a qualification they were asked the level of the qualification.

### **TAFE**

A Technical and Further Education institution. In Victoria this may also be interpreted as Training and Further Education.

# Unemployed

Persons who were not employed during the reference week, and:

 had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and were available for work in the reference week; or • were waiting to start a new job within four weeks from the end of the reference week and could have started in the reference week if the job had been available then.

# **Abbreviations**

### **ABBREVIATIONS**

ABS Australian Bureau of Statistics

ABSCQ Australian Bureau of Statistics Classification of Qualifications

ALLS Adult Literacy and Life Skills Survey

ANZSCO Australian and New Zealand Standard Classification of Occupations

ANZSIC Australian and New Zealand Standard Industrial Classification

AQF Australian Qualifications Framework

ASCED Australian Standard Classification of Education

CRB collector record book

CURF confidentialised unit record file ICF Indigenous Community Frame

ISO International Organization for Standardization

LFS Labour Force Survey n.f.d. not further defined relative standard error

SACC Standard Australian Classification of Countries

SE standard error

SEW Survey of Education and Work
TAFE Technical and Further Education

UN United Nations

# **Supplementary surveys (Appendix)**

# **APPENDIX SUPPLEMENTARY SURVEYS**

#### SUPPLEMENTARY SURVEYS

The Monthly Population Survey program collects data on particular aspects of the labour force. The following is an historical list of supplementary surveys to the monthly labour force survey. Data are available from the ABS website <a href="https://www.abs.gov.au">https://www.abs.gov.au</a>. Additional data from these surveys is available on request and can be obtained by contacting the ABS.

# A1 MONTHLY POPULATION SURVEY PROGRAM, Supplementary surveys to the LFS

	cat. no. F	Latest issue		
Child Care, Australia	4 402.0	Irregular	June 2008	
Child Employment, Australia	6 211.0	Irregular	June 2006	
Children's Participation in Cultural and Leisure Activities, Australia Education and Work, Australia	4 901.0 6 227.0	Irregular Annual	April 2009 May 2010	

Employee Earnings, Benefits, and Trade Union Membership, Australia	6 310.0	Annual	August 2009
Environmental Issues: Energy Use and Conservation	4602.0.55.001	Irregular	March 2008
Environmental Issues: Waste Management and Transport Use	4602.0.55.002	Irregular	March 2009
Environmental Issues: Water Use and Conservation	4602.0.55.003	Irregular	March 2010
Forms of Employment, Australia	6 359.0	Annual	November 2009
Involvement in Organised Sport and Physical Activity	6 285.0	Irregular	April 2007
Job Search Experience, Australia	6 222.0	Annual	July 2009
Labour Force Experience, Australia	6 206.0	Biennial	February 2009
Labour Force Status and Other Characteristics of Recent Migrants, Australia	6 250.0	Irregular	November 2007
Labour Mobility, Australia	6 209.0	Biennial	February 2010
Locations of Work, Australia	6 275.0	Irregular	November 2008
Persons Not in the Labour Force, Australia	6 220.0	Annual	September 2009
Pregnancy and Employment Transitions, Australia	4 913.0	Irregular	November 2005
Underemployed Workers, Australia	6 265.0	Annual	September 2009
Working Time Arrangements, Australia	6 342.0	Irregular	November 2009

# **Quality Declaration - Summary**

# **QUALITY DECLARATION - SUMMARY**

# INSTITUTIONAL ENVIRONMENT

For information on the institutional environment of the Australian Bureau of Statistics (ABS), including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment.

### **RELEVANCE**

The Education and Work survey provides annual information about a range of key indicators relating to the educational participation and attainment along with data on people's transition between education and work for all persons aged 15 to 64 years and persons aged 65 to 74 who are employed or marginally attached to the labour force.

As a result of this survey being supplementary to the Labour Force Survey (LFS), persons excluded from the LFS were also excluded from this survey (see Explanatory Notes of Labour Force, Australia (cat. no. 6202.0) for standard LFS exclusions). Additional exclusions from this survey were persons aged 75 or older, persons aged 65-74 years who are not intending to work, persons permanently unable to work, institutionalised persons and boarding school pupils. Very remote areas were included for the first time in 2009.

The type of information collected included: participation in education in the year prior to the survey, and in the survey month; labour force characteristics; type of educational institution; level of education of current and previous study; highest year of school completed; level and main field of highest non-school qualification; transition from education to work; unmet demand for education; and selected characteristics of apprentices.

The <u>Australian Classification of Education (ASCED) (cat. no. 1272.0)</u> was used to classify education. The ASCED is a national standard classification which can be applied to all sectors of the Australian education system including schools, vocational education and

training and higher education. The ASCED comprises two classifications: Level of Education and Field of Education.

### **TIMELINESS**

The most recent Education and Work survey was conducted throughout Australia in May 2010 as a supplement to the monthly LFS. The ABS has been conducting similar surveys since 1964. These surveys were conducted annually from February 1964 to February 1974, in May 1975 and 1976, in August 1977 and 1978 and annually in May since 1979. Data from the survey are released approximately six months after they have been collected.

# **ACCURACY**

The number of completed interviews (after taking into account scope and coverage exclusions) was about 39,800. This sample was achieved by obtaining a response rate of 96% from the selected households.

The Labour Force Survey is designed to primarily provide estimates for the whole of Australia and, secondly, for each state and territory.

Two types of error are possible in an estimate based on a sample survey: non-sampling error and sampling error.

Non-sampling error arises from inaccuracies in collecting, recording and processing the data. Every effort is made to minimise reporting error by the careful design of questionnaires, intensive training and supervision of interviewers, and efficient data processing procedures. Non-sampling error arises because information cannot be obtained from all persons selected in the survey.

Sampling error occurs because a sample, rather than the entire population is surveyed. One measure of the likely difference resulting from not including all dwellings in the survey is given by the standard error. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all dwellings had been included in the survey and about nineteen chances in twenty that the difference will be less than two standard errors.

Every 5 years, following the availability of data from the Census of Population and Housing, the ABS reviews the LFS sample design. As a result of the review following the 2006 Census, the new sample design, implemented over the period November 2007 to June 2008, resulted in a smaller sample size from July 2008. For more information see <a href="Information Paper: Labour Force Sample Design">Information Paper: Labour Force Sample Design</a>, Nov 2007 (cat. no. 6269.0)

### **COHERENCE**

The ABS seeks to maximise consistency and comparability over time by minimising changes to the survey; sound survey practice requires ongoing development to maintain the integrity of the data. No changes were made to the survey between 2009 and 2010.

In 2009 the scope of the survey was extended to include persons aged 65 to 74 years who are employed or marginally attached to the labour force. Persons are determined to be marginally attached to the labour force if they were not in the labour force in the reference week, wanted to work and: were actively looking for work but did not meet the availability criteria to be classified as unemployed; or were not actively looking for work but were available to start work within four weeks or could start work within four weeks if child care was available. To maintain comparability between years, the extra persons were not included in most of the tables. A separate table has been included.

Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2% of the total Australian and 20% of the Northern Territory population. From 2009 onwards SEW has a slightly wider scope, and excludes only persons in Indigenous communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by state/territory except for the Northern Territory where such persons account for about 15% of the population.

# INTERPRETABILITY

Detailed information on the terminology, classifications and other technical aspects associated with the Survey of Education and Work can be found in the pdf release as well as the relevant web pages included with this release.

### **ACCESSIBILITY**

In addition to the pdf publication, the tables and associated RSEs are available in spreadsheet format on the website. Extra tables not contained in the pdf are also included on the website.

A Confidentialised Unit Record File (CURF) containing confidentialised microdata from the Survey of Education and Work has been released biennially since 2001. The CURF facilitates interrogation and analysis of survey data. A CURF will not be released for the 2010 Survey of Education and Work. The most recent CURF for the Survey of Education and Work was released from the 2009 survey. For further details refer to the ABS website <a href="https://www.abs.gov.au">https://www.abs.gov.au</a>.

Data are also available on request. Note that detailed data can be subject to high relative standard errors which in some cases may result in data being confidentialised.

For further information about these or related statistics, contact the National Information and Referral Service on 1300 135 070.

# **Data Cubes (I-Note) - Data Cubes**

This Data Cube has been updated to reflect the correction of the proportion of persons aged 15-64 years enrolled in formal learning in 2010 which was published as 18.2% in Table 2, when it should have been 18.8%.

# **Publication (I-Note) - Publication**

This publication has been updated to reflect the correction of the proportion of persons aged 15-64 years enrolled in formal learning in 2010, which was published as 18.2% when it should have been 18.8%.

# **Data Cubes (I-Note) - Data Cubes**

# **Data Cubes (I-Note) - Data Cubes**

This data cube reports on an indicator from the National Education Agreement, and encompasses data for 2001-2010.

# **Data Cubes (I-Note) - Data Cubes**

This data cube reports on an indicator from the National Agreement for Skills and Workforce Development, and encompasses date for 2001-2010.

# **Data quality (Technical Note)**

**TECHNICAL NOTE DATA QUALITY** 

# **RELIABILITY OF THE ESTIMATES**

1 Since the estimates in this publication are based on information obtained from occupants of a sample of dwellings, they are subject to sampling variability. That is, they may differ from those estimates that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE), which indicates the extent to which an estimate may have varied by chance because only a sample of dwellings was included. There are about two chances in three (67%) that a sample estimate will differ by less than one SE from the number that would have been obtained if all dwellings had been included, and about 19 chances in 20 (95%) that the difference will be less than two SEs.

**2** Another measure of the likely difference is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate.

$$RSE\% = \left(\frac{SE}{estimate}\right) \times 100$$

**3** RSEs for estimates from 2010 SEW were calculated for each separate estimate and published in the 'direct' form. The Jackknife method of variance estimation is used for this process, which involves the calculation of 30 'replicate' estimates based on 30 different sub

samples of the original sample. The variability of estimates obtained from these sub samples is used to estimate the sample variability surrounding the main estimate.

4 Tables 2, 7, 8, 21 and 22 contain estimates collected from previous Education and Work surveys. The spreadsheets associated with this release contain RSEs for these estimates. The RSEs for the years 2001 and 2003 were calculated using the previous statistical SE models, which are available from each relevant issue of **Education and Work, Australia** (cat. no. 6227.0) available on the ABS website <www.abs.gov.au>. For the 2005, 2007 and 2008 data, the RSEs were directly calculated for each separate estimate. This method differs from that presented in the 2005 publication, which describes using statistical SE models to calculate RSEs for all time points. While the direct method is more accurate, the difference between the two is usually not significant for most estimates.

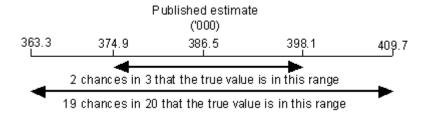
**5** In the tables in this publication, only estimates (numbers, percentages, means and medians) with RSEs less than 25% are considered sufficiently reliable for most purposes. However, estimates with larger RSEs are included and preceded by an asterisk (e.g. \*1.3) to indicate they are subject to high SEs and should be used with caution. Estimates with RSEs greater than 50% are preceded by a double asterisk (e.g. \*\*0.6) to indicate that they are considered too unreliable for general use.

#### CALCULATION OF STANDARD ERROR

**6** Standard errors can be calculated using the estimates (counts or means) and the corresponding RSEs. For example, Table 1 shows the estimated number of females in Victoria enrolled in a course of study was 386,500. The RSE Table corresponding to the estimates in Table 1 (see Table 1 Relative Standard Errors in the 'Relative Standard Error' section at the end of these Technical Notes) shows the RSE for this estimate is 3.0%. The SE is calculated by:

SE of estimate = 
$$\left(\frac{RSE}{100}\right)$$
 × estimate  
= 0.03 × 386,500  
= 11,600 (rounded to nearest 100)

**7** Therefore, there are about two chances in three that the value that would have been produced if all dwellings had been included in the survey will fall within the range 374,900 to 398,100 and about 19 chances in 20 that the value will fall within the range 363,300 to 409,700. This example is illustrated in the diagram below:



# PROPORTION AND PERCENTAGES

**8** Proportions and percentages formed from the ratio of two estimates are also subject to sampling errors. The size of the error depends on the accuracy of both the numerator and the denominator. A formula to approximate the RSE of a proportion is given below. This formula is only valid when x is a subset of y.

$$RSE(\frac{x}{4}) = \sqrt{[RSE(x)]^2 - [RSE(y)]^2}$$

**9** As an example, using estimates from Table 1, of the 741,500 persons enrolled in a course of study in Victoria, 355,000 are males, or 47.9%. The RSE for 355,000 is 3.4% and the RSE for 741,500 is 2.3% (see Table 1 Relative Standard Errors in the section 'Relatice Standard Error' at the end of these Technical Notes). Applying the above formula, the RSE for the proportion of males in Victoria enrolled in a course of study:

$$RSE = \sqrt{(3.4)^2 - (2.3)^2} = 2.5\%$$

**10** Therefore, the SE for the proportion of males in Victoria enrolled in a course of study is 1.2 percentage points (=(2.5/100) x 47.9). Hence, there are about two chances in three that the proportion of males in Victoria enrolled in a course of study is between 46.7% and 49.1%, and 19 chances in 20 that the proportion is between 45.5% and 50.3%.

#### **DIFFERENCES**

**11** Published estimates may also be used to calculate the difference between two survey estimates (of numbers or percentages). Such an estimate is subject to sampling error. The sampling error of the difference between two estimates depends on their SEs and the relationship (correlation) between them. An approximate SE of the difference between two estimates (x-y) may be calculated by the following formula:

$$SE(x-y) = \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

**12** While this formula will only be exact for differences between separate and uncorrelated characteristics or sub populations, it is expected to provide a good approximation for all differences likely to be of interest in this publication.

#### SIGNIFICANCE TESTING

**13** A statistical significance test for any of the comparisons between estimates can be performed to determine whether it is likely that there is a difference between the corresponding population characteristics. The standard error of the difference between two corresponding estimates (x and y) can be calculated using the formula in paragraph 12. This standard error is then used to calculate the following test statistic:

$$\left(\frac{x-y}{SE(x-y)}\right)$$

- **14** If the value of this test statistic is greater than 1.96 then there is statistical evidence of a significant difference in the two populations with respect to that characteristic. This statistic corresponds to a 95% confidence interval of the estimate. Otherwise, it cannot be stated with confidence that there is a real difference between the populations.
- **15** The imprecision due to sampling variability, which is measured by the SE, should not be confused with inaccuracies that may occur because of imperfections in reporting by respondents and recording by interviewers, and errors made in coding and processing data. Inaccuracies of this kind are referred to as non-sampling error, and they occur in any enumeration, whether it be a full count or sample. Every effort is made to reduce non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers, and efficient operating procedures.

### **RELATIVE STANDARD ERROR**

**16** Limited publication space does not allow for the separate indication of the SEs and/or RSEs of all the estimates in this publication, only RSEs for Table 1 are included below. However, RSEs for all tables are available free-of-charge on the ABS website <a href="www.abs.gov.au"><a href="www.abs.gov.au"></a>, released in spreadsheet format as an attachment to this publication, Education and Work, Australia, May 2009 (cat. no. 6227.0).

TABLE 1 RELATIVE STANDARD ERRORS, Persons aged 15-64 years enrolled in formal or non-formal learning - Selected characteristics-by state or territory of usual residence

100.000									
	NSW %	Vic.	Qld %	SA %	WA %	Tas. %	<b>NT</b> %	ACTA %	ust. %
Sex									
Males	2.8	3.4	3.2	4.7	5.1	3.9	7.8	6.7	1.9
Females	2.4	3.0	2.8	4.1	4.0	5.2	7.8	4.9	1.8
Age group (years)									
15-19	2.1	2.1	2.7	3.3	3.8	3.0	8.3	2.4	1.1
20-24	4.0	4.4	4.7	5.2	8.5	9.8	15.1	7.7	2.2
25-34	6.5	5.5	5.7	8.3	12.1	9.4	14.2	10.8	4.1
35-44	6.8	10.4	8.7	12.5	9.4	10.6	13.0	9.9	3.8
45-54	9.4	12.0	10.8	13.8	12.9	13.4	17.3	19.1	4.9
55-64	15.5	17.9	16.4	18.8	23.8	24.3	40.7	29.2	7.7
Country of birth									
Born in Australia	2.5	3.5	2.6	3.9	3.5	3.1	7.5	4.1	1.6
Born overseas	4.9	7.7	8.2	10.0	8.3	19.7	14.2	15.8	3.3
Area of usual residence									
State capital city	2.4	2.4	3.5	3.2	3.4	5.6	-	-	1.7
Balance of state/Territory	3.6	4.6	3.8	10.1	9.3	5.5	6.4	4.0	2.0
Labour force status									
In labour force	3.1	3.4	2.8	5.3	5.3	4.9	7.0	5.0	1.8
Employed	3.3	3.4	3.2	5.0	5.5	5.4	6.6	5.5	1.9
Employed full	3.9	5.4	4.4	11.3	6.4	9.4	9.6	8.8	2.4
time	3.9	3.4	4.4	11.5	0.4	3.4	9.0	0.0	2.4
Employed part time	4.9	3.3	5.1	5.5	8.4	8.5	9.9	6.5	2.3
Unemployed	9.4	12.0	14.2	18.3	26.6	23.2	74.4	23.1	6.0
Not in labour force	3.6	4.1	4.9	5.2	5.6	6.8	13.0	11.0	2.4
Level of formal or non-formal	0.0		1.0	0.2	0.0	0.0	10.0	11.0	۷
learning in May 2010(a)									
Formal learning(b)	2.1	2.4	2.7	3.5	3.7	2.9	7.0	4.0	1.5
Postgraduate Degree	10.5	9.1	13.6	14.8	24.2	18.7	31.3	17.6	6.4
Graduate	_0.0	· · -					00		•
Diploma/Graduate	18.2	15.3	24.4	23.4	28.8	31.1	48.8	20.4	9.2
Certificate									
Bachelor Degree	5.9	5.3	6.7	5.3	8.1	11.3	18.6	11.2	3.0
Advanced									
Diploma/Diploma	8.3	8.2	10.5	14.1	10.4	21.9	21.8	19.2	3.9
Certificate III/IV	7.3	7.1	6.9	11.8	12.1	12.4	11.2	15.8	4.1
Certificate I/II	14.4	19.2	22.6	23.4	25.4	31.9	51.1	56.3	
Certificate n.f.d.	12.4	16.4	22.2	22.7	19.9	35.3	30.3	35.5	6.0
Year 12 or below	2.2	2.6	3.3	3.3	4.5	4.4	7.2	3.9	1.3
Non-formal learning	10.6	9.9	18.3	21.3	18.1	25.6	32.9	27.3	6.3
Type of educational institution									
Secondary education	2.2	2.6	3.0	3.4	4.4	4.7	7.2	4.1	1.3
TAFE	4.9	6.3	4.7	9.9	7.8	10.5	19.0	14.5	2.7
Higher education	5.4	4.0	6.2	4.5	8.5	7.7	9.8	7.5	3.0
Other institution	6.8	7.7	5.8	10.2	11.1	11.0	16.4	18.7	3.7
Type of enrolment									

Full-time enrolment	2.6	2.6	3.6	3.3	4.4	4.4	10.6	5.2	1.6
Part-time enrolment	3.5	4.6	3.9	8.0	6.3	7.4	6.7	8.3	2.0
Total	1.9	2.3	2.3	3.6	3.6	2.7	6.4	4.0	1.4

<sup>-</sup> nil or rounded to zero (including null cells)

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<sup>(</sup>a) The levels of formal and non-formal learning are not necessarily listed in order from highest to lowest. For further details see paragraphs 19-21 of the Explanatory Notes.

<sup>(</sup>b) Includes 'Level not determined'.